

AMENDMENTS TO THE CLAIMS:

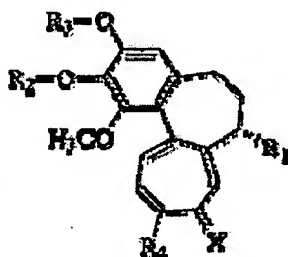
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1-11. (Canceled)

12. (Currently Amended) A tricyclic derivative represented by the following <Formula 1> or pharmaceutically acceptable salts thereof:

<Formula 1>



wherein

(1) R_1 is $-T_1-B_1$;

wherein

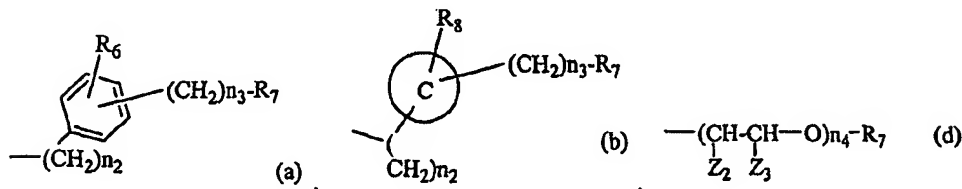
T_1 is $-X_1-$, $-X_1-C(X_2)-$, $-N(R_5)-$, $-N(R_5)C(X_2)-$, $-N(R_5)S(O)_{n_1}-$, $-N(R_5)C(O)-X_1-$ or $-N(R_5)C(X_1)NH-$,

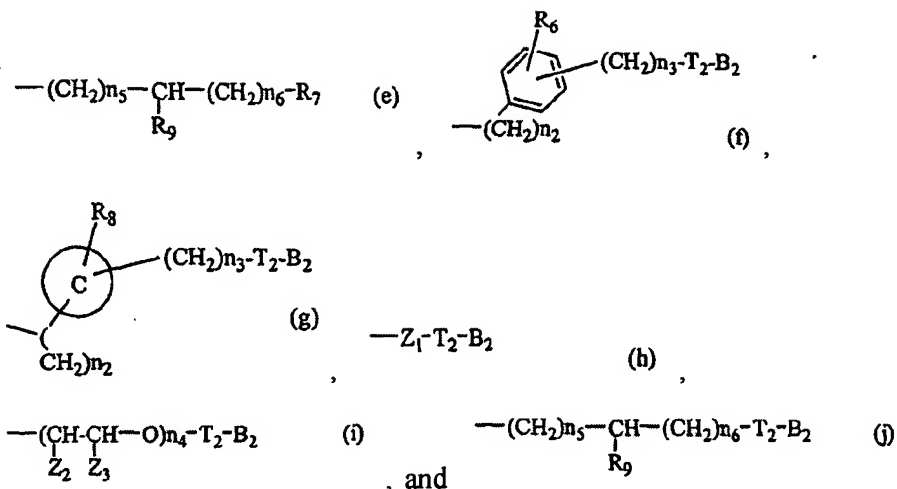
wherein

X_1 and X_2 are O or S; and

R_5 is H or $C_1 \sim C_5$ alkyl group, n_1 is an integer of 1~2; and

B_1 is selected from the group consisting of



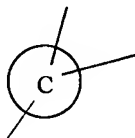


wherein,

R₆ is halogen, hydroxy, C₁-C₃ alkoxy, amino, nitro, cyano or C₁-C₃ lower alkyl group; and

R_8 are each is H, halogen, hydroxy, C_1 - C_3 alkoxy, amino, nitro, cyano or $C_4 \sim C_8$ C_1 - C_3 lower alkyl group;

R₇ is mercapto, ~~ONO~~, ~~ONO₂~~ or ~~SNO~~, and R₉ is are each halogen, hydroxyl, mercapto, -ONO, ONO₂ or SNO, in which R₇ and R₉ are same or different;



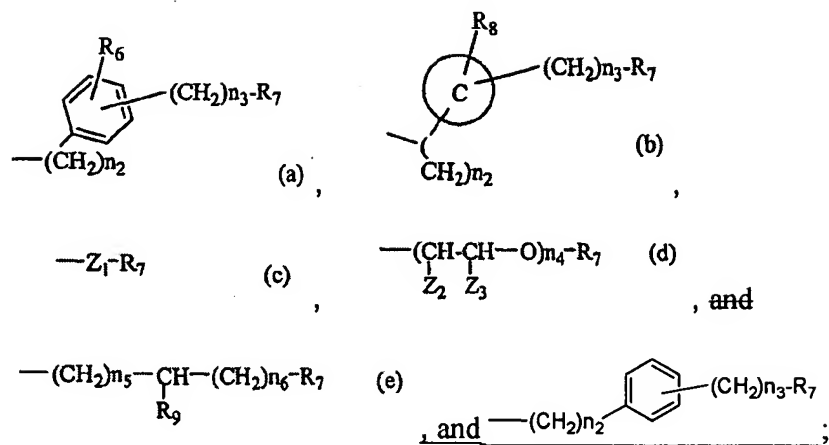
is a C₅-C₆ membered saturated or unsaturated heterocyclic ring containing 1~2 of hetero atom, in which the hetero atom is selected from a group consisting of O, S and N;

Z₁ is C₁-C₁₀ straight-chain or branched-chain alkyl group;

Z₂ and Z₃ are each independently H or methyl group, in which Z₃ is H when Z₂ is methyl group, Z₂ is H when Z₃ is methyl group;

T₂ is -X₁- or -X₁-C(X₂)-, in that X₁ and X₂ are each independently O or S;

B₂ is selected from the group consisting of:



n_2 is an integer of 0-3;

n_3 is an integer of 1-5;

n_4 is an integer of 1-5; and

n_5 and n_6 are each independently an integer of 1-6;

(2) R₂ and R₃ are each independently H, -PO₃H₂, phosphonate, sulfate, C₃-C₇ cycloalkyl, C₂-C₇ alkenyl, C₂-C₇ alkynyl, C₁-C₇ alkanoyl, C₁-C₇ straight-chain or branched-chain alkyl or sugar, in which sugar is a monosaccharide such as glucuronyl, glucosyl or galactosyl;

(3) R₄ is OCH₃, SCH₃ or NR₁₀R₁₁, in which R₁₀ and R₁₁ are each independently H or C₁₋₅ alkyl; and

(4) X is O or S .

13. (Previously Presented) The tricyclic derivative or pharmaceutically acceptable salts thereof as set forth in claim 12, wherein

T_1 is $-N(R_5)C(X_2)-$, $-N(R_5)C(O)-X_1-$ or $-N(R_5)C(X_1)NH-$, wherein X_1 and X_2 are each O ,

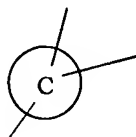
n_4 is an integer of 1-3;

n_5 and n_6 are each independently an integer of 1~3;

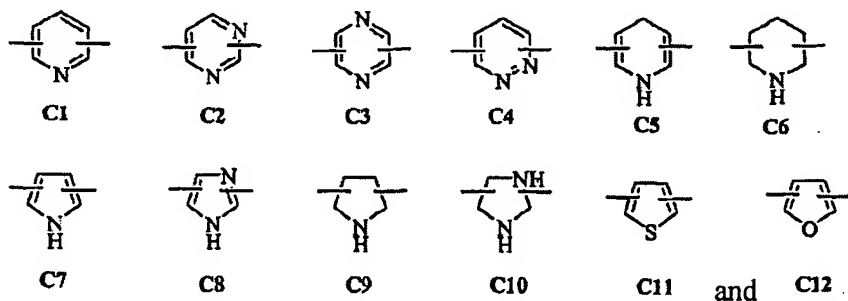
R₂ and R₃ are each independently C₃-C₇ cycloalkyl or C₁-C₇ alkyl; and

R₄ is SCH₃ or OCH₃.

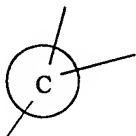
14. (Previously Presented) The tricyclic derivative or pharmaceutically acceptable salts thereof as set forth in claim 12, wherein



is selected from the group consisting of



15. (Previously Presented) The tricyclic derivative or pharmaceutically acceptable salts thereof as set forth in claim 12, wherein



is selected from the group consisting of C1 (pyridyl group) substituted at position 2 and 6 or position 2 and 5, C7 (pyrrolyl group) substituted at position 2 and 5 or position 2 and 4, C11 (thiophenyl group) and C12 (furanyl group).

16. (Previously Presented) The tricyclic derivative or pharmaceutically acceptable salts thereof as set forth in claim 12, wherein Z_1 is $C_2 \sim C_5$ straight-chain or branched-chain alkyl group or cycloalkyl group having substituent.

17. (Previously Presented) A tricyclic derivative or pharmaceutically acceptable salts thereof, wherein the tricyclic derivative comprises:

1)

6-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-nicotineamide;

2) 5-nitrooxymethyl-furan-2-carboxylic

acid-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-amide;

5) 6-nitrooxymethyl-pyridine-2-carboxylic

acid-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-amide;

6) 5-nitrooxymethyl-thiophene-2-carboxylic

acid-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-amide;

8)

N-[(7S)-3-ethoxy-1,2-dimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-2-fluoro-3-nitrooxymethyl-benzamide;

9)

2-fluoro-N-[(7S)-3-isopropoxy-1,2-dimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-3-nitrooxymethyl-benzamide;

10)

2-fluoro-3-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

11)

N-[(7S)-3-cyclopentyloxy-1,2-dimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-2-fluoro-3-nitrooxymethyl-benzamide;

12)

3-fluoro-5-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

13)

N-[(7S)-3-ethoxy-1,2-dimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-3-fluoro-5-nitrooxymethyl-benzamide;

14)

3-fluoro-N-[(7S)-3-isopropoxy-1,2-dimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-5-nitrooxymethyl-benzamide;

15)

N-[(7S)-3-cyclopentyloxy-1,2-dimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-3-fluoro-5-nitrooxymethyl-benzamide;

16)

4-fluoro-3-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

17)

2-fluoro-5-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

18)

3-hydroxy-5-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

19)

3,5-*bis*-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

20)

2-hydroxy-4-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

21) 4-nitrooxymethyl-thiophene-2-carboxylic acid

[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-amide;

- 22) 3-nitrooxymethyl-thiophene-2-carboxylic acid
[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-amide;
- 25) 3-nitrooxybenzoic
acid-5-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-pyridine-2-yl-methylester;
- 26) 4-nitrooxybutyric
acid-5-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-pyridine-2-yl-methylester;
- 27) 3-nitrooxymethyl-benzoic
acid-6-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-pyridine-2-yl-methylester;
- 28) 4-nitrooxybutyric
acid-6-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-pyridine-2-yl-methylester;
- 29) 3-nitrooxymethyl-benzoic
acid-2-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-phenylester;
- 30) 4-nitrooxybutyric
acid-2-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-phenylester;
- 31) 3-nitrooxymethyl-benzoic
acid-3-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-phenylester;
- 32) 4-nitrooxybutyric
acid-3-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-phenylester;

33) 3-nitrooxymethyl-benzoic
acid-3-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-benzylester;

34) 4-nitrooxybutyric
acid-3-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl-carbamoyl]-benzylester;

37)
3-fluoro-5-nitrosooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

39)
3-fluoro-5-nitrosothiomethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

40)
3-fluoro-5-nitrooxymethyl-N-[(7S)-1,2,3,10-tetramethoxy-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

42)
3-fluoro-N-methyl-5-nitrooxymethyl-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-benzamide;

43)
2-(3-fluoro-5-nitrooxymethyl-phenyl)-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-acetamide; or

44)
2-(2-fluoro-5-nitrooxymethyl-phenyl)-N-[(7S)-1,2,3-trimethoxy-10-methylsulfanyl-9-oxo-5,6,7,9-tetrahydro-benzo[a]heptalen-7-yl]-acetamide.

18. (Previously Presented) An anticancer agent composition or anti-proliferation agent composition comprising the tricyclic derivatives or pharmaceutically acceptable salts thereof as set forth in claim 12 as an effective ingredient and a pharmaceutically acceptable excipient.

19. (Previously Presented) An angiogenesis inhibitor composition comprising the tricyclic derivatives or pharmaceutically acceptable salts thereof as set forth in claim 12 as an effective ingredient and a pharmaceutically acceptable excipient.
20. (Previously Presented) An anticancer agent composition or anti-proliferation agent composition comprising the tricyclic derivatives or pharmaceutically acceptable salts thereof as set forth in claim 17 as an effective ingredient and a pharmaceutically acceptable excipient.
21. (Previously Presented) An angiogenesis inhibitor composition comprising the tricyclic derivatives or pharmaceutically acceptable salts thereof as set forth in claim 17 as an effective ingredient and a pharmaceutically acceptable excipient.